DOCUMENT RESUME

ED 106 605 CE 003 777

AUTHOR Anderson, Nancy
TITLE The Orthodontist, Our Friend: World of Work Project: Fifth Grade: Health.
INSTITUTION Utah State Board for Vocational Education, Salt Lake City.
NOTE 37p.; For related documents see CE 003 775-6 and CE 003 778

EDRS PRICE MF-$0.76 HC-$1.95 PLUS POSTAGE
DESCRIPTORS *Career Awareness; Career Education; Career Opportunities; *Curriculum Guides; *Dental Health; *Dentists; Elementary Education; Grade 5; Health Education; Integrated Curriculum; Learning Activities; Occupational Information; Resource Materials; *Resource Units
IDENTIFIERS *World of Work

ABSTRACT

The document is one of the teaching units developed by the Utah World of Work Project, designed to integrate career awareness into the regular curriculum at the elementary level. The fifth grade guide is tied to the health education area and focuses on the work of the orthodontist in terms of understanding what an orthodontist does, learning what orthodontic treatment involves, developing a knowledge of dental health in general, and developing awareness of career possibilities in the dental profession. Five lessons including learning activities and resource materials are provided, organized by content and objective, and suggestions are included for additional resources. (SA)

ED106605

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

THE ORTHODONTIST OUR FRIEND

BY
NANCY ANDERSON
MURRAY SCHOOL DISTRICT

World of Work Project
Fifth Grade
Health

CE003777

WORLD of WORK

Occupational Education Program for Children

Dr. Ray D. Warner -- Director

Sponsored by

Utah State Department of Public Instruction

Vocational Education Division

136 East South Temple

Salt Lake City, Utah

THE ORTHODONTIST, OUR FRIEND

List of Objectives

To be aware of the decision-making process that affects me and other.

To learn that my parents can help me make decisions.

To identify the basic steps in the decision-making process: identify and analyze the problem, determining possible solutions, experimenting, evaluating, and making needed changes.

To begin to look at my strengths and weaknesses, interests, talents, so that I can make realistic progress and choices.

To begin to determine my needs, wants, and luxuries.

To learn that jobs may continue, change, disappear, or be created.

To develop an awareness that there are a wide variety of careers in our society.

To develop an awareness that workers perform their labors for many reasons.

THE ORTHODONTIST, OUR FRIEND

Outline of Concepts

.01 An orthodontist is a dentist who is especially trained to diagnose and treat problem teeth (abnormal teeth arrangements) with orthodontic appliances (bands, archwires, rubber bands, headgear, etc.).

.02 Malocclusion (irregular teeth) may be caused by hereditary factors, environmental factors, or a combination of both.

.03 The orthodontist's tool is called the appliance and has several important parts.

.04 Knowledge of oral health and anatomy is basic to the development of good dental health habits.

.05 There are many new developments in the dental profession and its related career specialties.

THE ORTHODONTIST, OUR FRIEND

Outline of Learning Experience Objectives

.01 Demonstrate knowledge of the work of an orthodontist by naming at least three things he does for him or her and show a cooperative attitude toward the orthodontist by wearing corrective appliances if necessary.

.02 Identify the two main causes of malocclusion (irregular teeth) and discuss at least three preventative, corrective measures that can be taken orally, in writing, or by drawing.

.03 Demonstrate knowledge of the orthodontics appliance by identifying its important parts and explaining the functions of each.

.04 Demonstrate a knowledge of good eating and safety habits in relation to orthodontics by making charts and posters, or writing safety jingles, limericks, or slogans.

.05 Show interest in dentistry and its related field by identifying and describing the work of at least three of the new dental-related career specialties.

Food, Health & Home — Cluster

The Orthodontist, Our Friend — Area of Study

CONCEPT: An orthodontist is a dentist who is especially trained to diagnose and treat problem teeth (abnormal teeth arrangements) with orthodontic appliances (bands, archwires, rubber bands, headgear, etc.).

OBJECTIVE: Demonstrate knowledge of the work of an orthodontist by naming at least three things he does for him or her and show a cooperative attitude toward the orthodontist by wearing corrective appliances if necessary.

WHAT I NEED	WHAT I DO
	1. MOTIVATE the learners by asking the following questions: a. What is an orthodontist? b. What are some good reasons for straightening teeth? c. Are there many children who need the help of an orthodontist? d. At what age of life are abnormal teeth arrangements most likely to be present? e. What are some signs that show that the help of an orthodontist is needed? f. Can all abnormal teeth arrangements be corrected? g. At what age should orthodontic treatment be started? h. What is the role of the patient in orthodontic treatment? i. Is orthodontic treatment expensive? j. How long does orthodontic treatment take?
WOW Worksheets: Why Orthodontics? 01 01. What is the Meaning of the Word? 01 02.	2. HAVE the learners RESEARCH in the suggested books and STUDY THE WOW Worksheets 01 01 and 01 02 to find the answers to the outlined questions.
BOOKS & PAMPHLETS: Orthodontics: Questions and Answers, American Dental Association. Artificial Dentures--A Health Service, American Dental Association.	

WHAT I NEED	WHAT I DO
Facts You Should Know About Tooth Loss, Lactona Products Division. Dental Health Facts for Teachers, American Dental Association. Attractive Teeth For Teenagers, American Dental Association. FILM: Putting It Straight, American Dental Association.	3. SHOW the film Putting It Straight to the learners AND/OR INVITE a local orthodontist in to talk to the class about his or her work. 4. DISCUSS the questions outlined at the beginning of this Lex with the orthodontist and the learners. 5. ASK the learners: a. What are at least three things the orthodontist can do for you? b. How many of you think you need orthodontic care? c. How many will arrange with your parents for the necessary treatment and then cooperate fully with the orthodontist as necessary? 6. ENCOURAGE the learners to follow through in getting necessary advice and care from an orthodontist.

WI / Orthodontics?

Q. *What is orthodontics?*

A. Orthodontics is the name applied to one division of the practice of dentistry. It has to do with the detection, study, prevention and correction of irregularities in tooth position and jaw relationship and deformities of the face produced by these conditions. The specialist who performs orthodontic diagnosis and treatment is called an orthodontist.

Q. *What is abnormal tooth arrangement properly called?*

A. The technical name for this condition is "malocclusion." This is the term applied to irregularities of tooth position and occlusion (the fitting together of the teeth on closing the jaws). Malocclusion or dental deformity may in turn lead to deformities of the jaws and face.

Q. *Can malocclusion be harmful to general health?*

A. Yes, failure of the teeth to meet properly (abnormal bite) may interfere with chewing. This may prevent the individual from selecting foods necessary for adequate nutrition. Improper chewing of food puts an extra burden on the stomach. There may also be a strain on the jaw joints and muscles when the teeth do not come together properly. Dental and facial deformities are often a factor in causing emotional problems.

Q. *How does malocclusion affect health of the mouth?*

A. Food particles will lodge more readily between teeth that are not in proper position. In addition, teeth that overlap or are crowded are much more difficult to clean. Food particles retained between the teeth and near the gums can lead to tooth decay and diseases of the gums.

Q. *How are personal appearance and mental attitude affected by malocclusion?*

A. It has been said "an attractive smile is a person's greatest asset." Certainly attractive teeth are essential to a pleasing appearance. Irregular or protruding teeth detract from appearance and may result in a feeling of inferiority or other emotional problems in some children and adults.

Q. *Are there many cases of malocclusion?*

A. It has been estimated on the basis of several surveys that approximately 50% of the children of any given age group need some form of orthodontic supervision.

Why Orthodontics?

Q. *During what period of life is malocclusion most likely to be present?*

A. Malocclusion is most common during the time the deciduous (first) teeth are being shed and the permanent teeth are erupting. It is least likely to be present in the first teeth. Malocclusion, however, may occur at any age. An orthodontist can advise whether treatment is necessary.

Q. *What are some of the evidences of dental and facial deformity which should cause the parents to seek competent advice?*

A. Crowded, spaced or rotated teeth. Protruding upper front teeth or a lower jaw that appears to be prominent, deficient or swung to one side. Overly prominent lips as a result of front teeth (upper or lower) that are too prominent. Front teeth that do not meet when the back teeth are closed or upper teeth that completely cover the lowers when the back teeth are closed.

Q. *Can all malocclusions be corrected?*

A. The correction of irregularities of the teeth and jaws is always a relative thing. Occlusion can be greatly improved; in many cases malocclusion can be entirely eliminated. In nearly all cases function of the teeth and personal appearance can be improved.

Q. *At what age should orthodontic treatment be started?*

A. The nature of the malocclusion determines the age at which treatment should be started. Preventive measures may be applied at any time in the development of the child's occlusion. Only a person trained and experienced in the dental and facial development of the child can decide when treatment should be started. Parents should not rely on their own judgment or advice from friends. It is best to obtain advice from the family dentist or an orthodontist.

Q. *Will orthodontic appliances cause the teeth to decay or become weakened?*

A. A well-cemented band, while in place, actually protects that portion of the tooth covered. An appliance in the mouth, however, can favor food retention. The appliance and the teeth should be kept scrupulously clean so that exposed surfaces of the teeth will not be more subject to decay than they would otherwise be. Correction of the malocclusion leaves the teeth, gums and supporting bone structure in a more healthy condition than before treatment.

Why Orthodontics?

Q. *What determines the cost of orthodontic treatment?*

A. Cost of orthodontic treatment will vary with each case since no two cases are identical. Some of the factors involved in determining cost are: complexity of the problem, the total time it will take to obtain satisfactory results, how often the patient will have to be seen, the type of appliance that will be necessary to treat the case, changes that will have to be made on the appliance during the treatment and, finally, cooperation of the patient.

Q. *Since orthodontic care requires a considerable period of time, how is payment for services averaged?*

A. Most orthodonitsts require an initial payment to cover the cost of preparing diagnostic materials, planning the treatment program and preparing the initial appliance. Payment for the remainder of the treatment program can usually be arranged satisfactorily by the parent and the orthodontist to extend over a number of months or years.

What is the Meaning of the Word?

ORTHODONTICS

IT COMES FROM TWO GREEK WORDS. . .
"ORTHOS," MEANING RIGHT OR CORRECT,
AND "DONS," MEANING TOOTH. TO
HAVE ORTHODONTIC TREATMENT IS TO
HAVE "CORRECTED TEETH."

Food, Health & Home — Cluster

The Orthodontist, Our Friend — Area of Study

CONCEPT: Malocclusion (irregular teeth) may be caused by hereditary factors, environmental factors, or a combination of both.

OBJECTIVE: Identify the two main causes of malocclusion (irregular teeth) and discuss at least three preventative, corrective measures that can be taken orally, in writing, or by drawing.

WHAT I NEED	WHAT I DO
WOW Worksheet: Malocclusion. 02 01.	1. DISPLAY the WOW Worksheet 02 01 so that all learners can see it. DISCUSS the following with the learners: a. What is occlusion? b. What is malocclusion? c. What are the main causes of malocclusion? d. What are some of the preventative, corrective measures that can be taken when malocclusions are present? e. What are some of the different kinds of the common malocclusions?
Paraffin, plaster of Paris (quick setting powder to be mixed with water), rubber or plastic bowl for mixing plaster of Paris, stirring stick.	2. DEMONSTRATE how poorly-fitted teeth and gums can be discovered by making a model of the teeth in the following way: a. Biting or having a learner bite on paraffin wax which has been slightly warmed. b. Then filling the paraffin model with plaster of Paris. This will show occlusion. (Remember, malocclusion is when teeth on the top layer and the bottom layer do not meet together properly when the jaws are closed.) If time and materials permit, you may want all learners participating to try this.
WOW Worksheet: THE DENTIST AND HIS HELPERS. Functions of the Teeth. 03 03. BOOKS AND PAMPHLET: Orthodontics, Questions and Answers. American Dental Assoc.	3. DISCUSS some good reasons for straightening teeth. ASK learner to research how teeth can affect digestion, speech, and appearance in the suggested materials and in other available materials. USE the WOW Worksheet, 03 03 from the unit, THE DENTIST AND HIS HELPERS as necessary. REFER the learners to the pamphlet and books suggested.

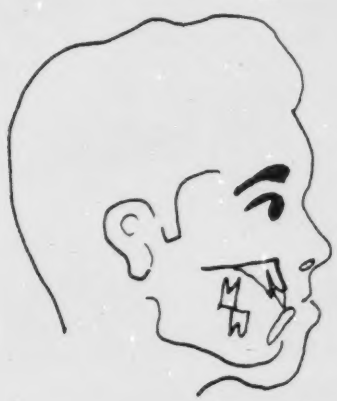
WHAT I NEED	WHAT I DO
WOW Worksheet: Prevention of Malocclusion. 02 02.	4. HAVE learners RESEARCH preventative, corrective measures that can be taken to prevent the necessity of orthodontic treatment in books, other available materials, and in the WOW Worksheet 02 02. 5. REINFORCE the concept by having each learner SHOW an understanding of at least three preventative, corrective measures orally in discussion, in writing, or by drawing: a. posters b. pictures c. murals, etc. 6. DISPLAY their work for others to share.

Malocclusion

Malocclusion may be defined as irregularities in tooth or jaw position so that the upper and lower teeth do not come together in proper relationship (occlusion).

Malocclusions may be caused by hereditary factors, environmental factors or a combination of both. Hereditary factors include such things as tooth size, jaw size, jaw shape, jaw position, muscle abnormalities, missing teeth, deformed teeth, etc., with one or more of these factors being the primary cause of most malocclusions.

Environmental factors include such things as premature loss of primary teeth, loss of six year molars, tongue thrusting, lip sucking, reverse swallow pattern, thumb sucking, finger sucking, etc. These factors are occasionally the primary cause of malocclusion, but are more often modifying factors in malocclusions which are basically hereditary.



Premature loss of primary teeth is probably the major cause of non-hereditary malocclusion. This factor deserves special mention, since it is a direct result of neglect. The attitude that "baby teeth do not need to be filled since these teeth will be lost anyway," is a mistake that subjects a child to unnecessary infections and toothaches, and frequently results in a need for costly correction of a malocclusion which could have been prevented. In almost no other area of dentistry or medicine is *prevention* as effective as it is in a child's developing dentition. Fluoridation of water supplies along with good oral hygiene habits can prevent a high percentage of teeth from decaying, and restoring primary teeth which do decay will prevent premature loss of these teeth, which in turn will prevent a malocclusion from developing. If a primary tooth is lost, a space maintainer can still prevent the development of a non-hereditary malocclusion or prevent the worsening of a hereditary malocclusion which may already be present. If a permanent tooth is lost, it should be replaced to prevent movement of adjacent teeth, and thus prevent a malocclusion from developing.

Malocclusion

Q. *What causes malocclusion?*

A. There are two general causes of irregular teeth, inherited and acquired. Such factors as size of jaw and size of teeth are handed down from parents to their offspring. Other factors such as harmful habits or early loss of teeth through decay are mainly a result of individual behavior. The nature of malocclusion, however, is so complex that usually it is not possible to attribute the condition to any one cause.

Q. *How does size of teeth and jaws affect the position of the teeth?*

A. The size of the jaws must be adequate to contain all the teeth in proper position. If the jaws are too small or the teeth are too large, irregularities usually result.

Q. *What is the effect of habits?*

A. Living bone is not hard and unyielding as one might suppose. On the contrary it can be molded by the application of pressure. Sucking habits, biting habits and improper posture may exert pressures that interfere with a good growth pattern. If there is an inherited tendency toward a dental or facial deformity, such habits will be more harmful than they are in an individual with a normal growth pattern.

Q. *When does a child begin to form habits?*

A. An infant begins to form habits (both good and bad) immediately after birth. Just as his growth is at its highest rate during infancy, so is his habit formation.

Q. *Do certain sleeping positions cause malocclusion?*

A. Although the specific cause of various types of malocclusion is not always easily determined, many dental authorities believe that malocclusion sometimes is caused by a sleeping posture which produces prolonged pressure on the jaws.

Q. *What are some other habits that may cause malocclusion?*

A. Abnormal thumb or finger sucking, tongue thrusting or lip-sucking. Any of these habits may bring abnormal pressure to bear on the teeth and bones of the face, and they will do damage to the jaws if continued vigorously for any length of time. The results can be abnormal development of either or both jaws, open-bite deformities and displacement of the teeth.

Malocclusion

Q. *What is the cause of abnormal thumb or finger sucking?*

A. A distinction must be made between normal and abnormal sucking, including thumb and finger sucking. Sucking is a part of the normal behavior pattern of the infant. Various explanations have been advanced for abnormal sucking, such as insufficient feeding, a bored, unhappy or overfatigued child or other emotional disturbance.

Q. *What is the result of premature loss of the deciduous teeth?*

A. When the deciduous teeth are lost too early, the adjoining teeth may shift, thus reducing the space intended for the permanent teeth.

Q. *What is the effect of prolonged retention of the deciduous teeth?*

A. When the deciduous teeth are retained too long, the incoming permanent teeth may be prevented from erupting at the normal time or may erupt in an undesirable position.

BEFORE

ORTHODONTIC TREATMENT

Teeth that do not come together (occlude) properly, like gears that do not mesh as they should, cannot perform effectively the function for which they are intended. Damage will be done to the teeth, the supporting bone and to the jaw joints just as there will be damage to the gears.

AFTER

ORTHODONTIC TREATMENT

Teeth that come together properly, like well-working gears, can carry out their function effectively and with no harm to the bone in which they are imbedded. In addition, improved appearance contributes to the happiness and emotional well-being of the patient.

Prevention of Malocclusion

Q. *Can irregularities of the teeth and deformities of the jaws be prevented?*

A. Malocclusion due to inherited causes cannot be prevented. It can be intercepted in many instances so that it does not develop to any appreciable extent. The dentist can frequently halt certain conditions in the mouth such as those related to mouth habits, premature loss of teeth, filling of teeth, preservation of space for teeth which will erupt later and extraction of deciduous teeth which have been retained past the time when they should have been shed.

Q. *When should preventive measures be started?*

A. Preventive measures must be used early. Therefore, as soon as a child has all his deciduous teeth, at about age 2½ to 3 years, he should make his first visit to the dentist. These visits should be continued regularly, as often as the dentist suggests. If at any time the dentist considers it necessary, he can then recommend orthodontic consultation.

Q. *Why is it important to keep the deciduous teeth in healthy condition until they are shed?*

A. Deciduous teeth maintain the shape of the dental arch and the necessary space for eruption of the permanent teeth. These teeth are essential to chewing at a very important period of a child's growth. Also, decayed deciduous teeth may become infected and abscessed.

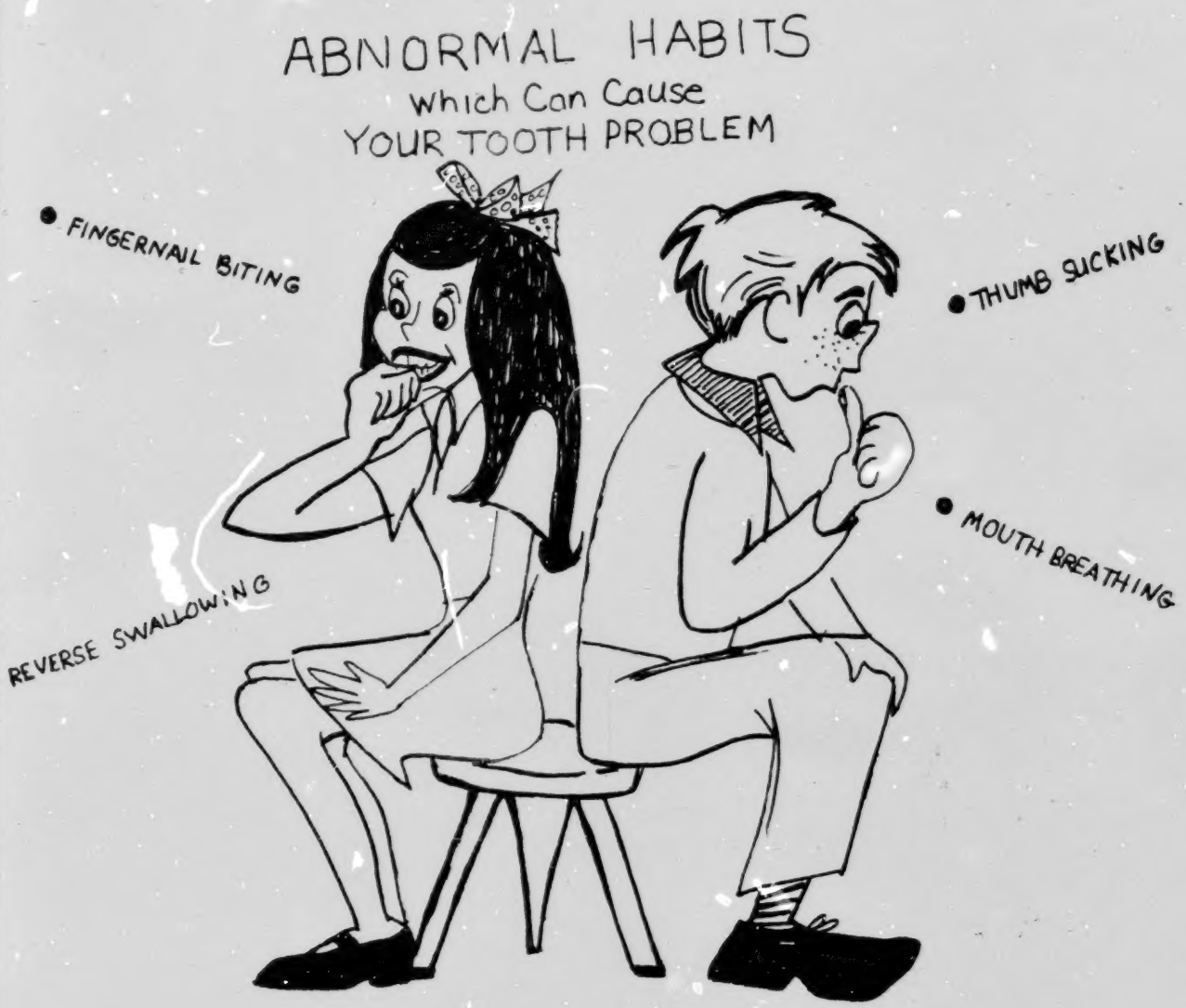
Q. *If a deciduous tooth is lost long before the permanent tooth to replace it is due to erupt, what should be done?*

A. When a deciduous tooth is lost a long time (six months or more) before the permanent tooth to replace it is due to erupt, a suitable space maintainer may be necessary. Since immediate placement of the appliance may be indicated, the child should be taken to the dentist promptly for a decision.

Q. *If deciduous teeth are retained too long, what should be done?*

A. X-ray examination will show the condition of the roots and the presence and progress of the permanent teeth. If the dentist finds that they are formed sufficiently to be ready to erupt, the deciduous teeth should be removed. He also will give advice concerning the need for the services of an orthodontist.

Prevention of Malocclusion (cont.)



Food, Health & Home — Cluster

The Orthodontist, Our Friend — Area of Study

CONCEPT: The orthodontist's tool is called the appliance and has several important parts.

OBJECTIVE: Demonstrate knowledge of the orthodontics appliance by identifying its important parts and explaining the functions of each

WHAT I NEED	WHAT I DO
	1. MOTIVATE the learners by asking anyone who is already wearing an orthodontic appliance to show it to the class and identify its important parts and explain the functions of each. OR MOTIVATE the learners by asking a local orthodontist to class to demonstrate an orthodontic appliance, identify its parts, and explain the functions of each. OR MOTIVATE the learners by showing them the picture on the WOW Worksheet 03 01, or better still, a blown-up chart of the picture identifying the important parts of the appliance. USE the rest of the WOW Worksheet with the learners to discuss the functions of each part. SEE that the following questions are covered in the discussion: a. What are the main parts of the orthodontist's appliance? b. What is the function of the bands? c. What is the function of the archwires? d. What is the function of the rubber bands? e. What is the function of the headgear? f. When does headgear therapy help most? g. When are palatal spreading devices used?
WOW Worksheet: The Orthodontist's Appliance. 03 01.	

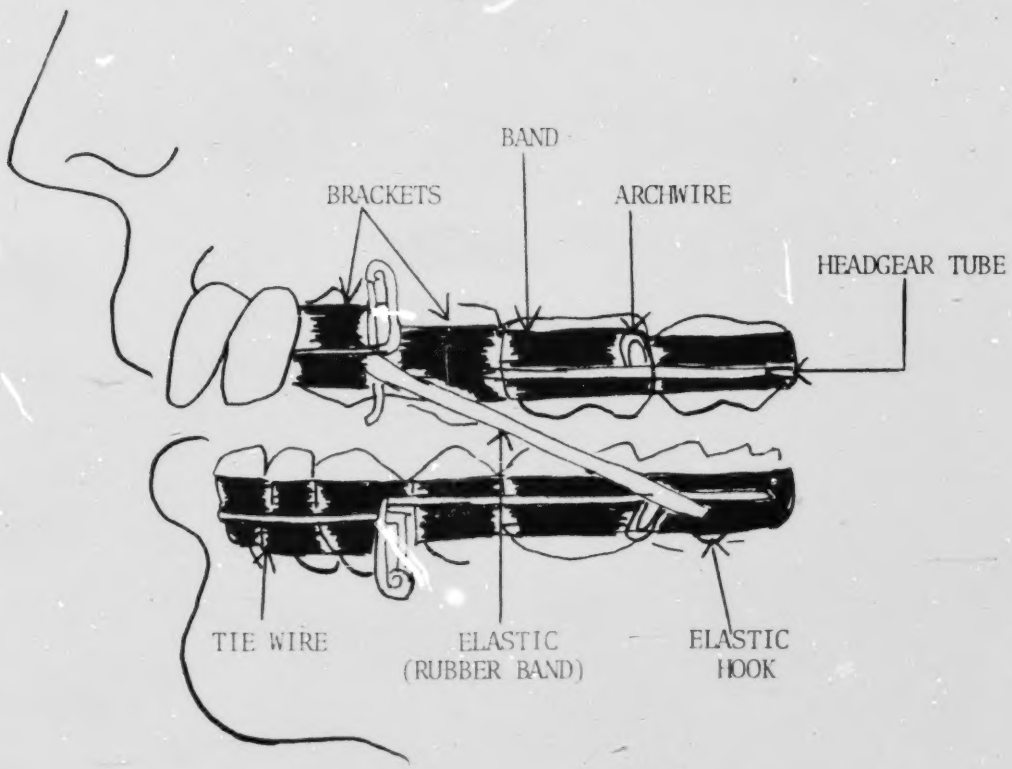
WHAT I NEED	WHAT I DO
WOW Worksheet: The Parts of the Orthodontist's Appliance. 03 02	2. HAND OUT the WOW Worksheet 03 02 and HAVE each learner FILL IN the blank spaces. 3. EVALUATE the WOW Worksheets with the learners. 4. PRESENT and STRESS to the learners that whether or not the orthodontic treatment is pleasant and successful depends largely upon the cooperation of the wearer. The following four rules are mandatory; a. First, extreme care of the mouth is necessary during treatment. Appliances are very delicate (although strong enough to do their jobs), and they will not stand undue abuse or neglect. b. Second, the wearer must be very careful about the types of food eaten and manner in which it is eaten. Hard foods and sticky foods, such as caramels, do a great deal of damage to appliances. c. Third, the bands and teeth must be kept extra clean. No matter how carefully the teeth are cleaned in the office, only continuing care at home will keep them clean. d. Fourth, if instructions are followed, everything will go on schedule. If instructions are not followed, NOTHING will be on schedule. It may even be impossible to solve the problem.

WOW Worksheet: 03 Lex. 01 W.S.

The Orthodontist's Appliance

The orthodontist's job is to design an appliance that will control and move teeth with maximum accuracy and efficiency.

The orthodontist's tool is called the appliance. This is a diagram of an Orthodontic Appliance.



The Orthodontist's Appliance

The most important parts of the usual appliance are:

1. BANDS: These are thin bands of metal, carefully fitted to the tooth and then cemented in place. They carry brackets, tubes, or rotating levers. They give the orthodontist a way to grasp and control each individual tooth.

2. ARCHWIRES: These act as a guide or track along which the teeth are to be moved. They are changed throughout the treatment. Each change brings the teeth closer to the ideal tooth position.

3. RUBBER BANDS: These provide a force which helps teeth move, usually employing one arch or group of teeth against the other.

4. HEADGEAR: Sometimes called a neckstrap or cervical retractor. This uses an elastic force, outside the mouth itself, that helps to bring the upper teeth back.

The Orthodontist's Appliance

"Headgear Treatment" Recent findings show that some types of malocclusions benefit from early treatment. (In the past it was a common practice of orthodontists to wait until a child had all of his permenent teeth before starting orthodontic correction.)

Headgear therapy is used for one type of early correction. It consists of placing bands (metal rings) around the upper six-year molars as anchors for the application of a backward force.

This appliance is used in cases where the upper teeth or jaw are too far forward. Because the headgear or retractor tends to retard the upper jaw in its forward growth, it allows the lower jaw to catch up simply by developing at its natural rate during the period of active facial growth.

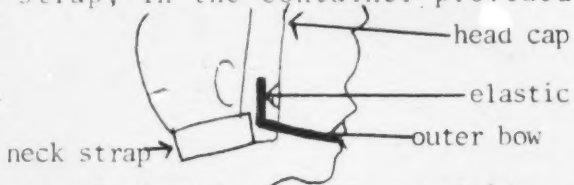
The wearer must wear the appliance from 12 to 24 hours, or as he or she has been instructed. Some temporary discomfort may be experienced during the first night or two. An aspirin may help. Once the headgear treatment is started, it must be kept up continuously. If it is left off for just one night, it may have to be worn for many extra nights and extend the treatment unnecessarily. So, don't goof! Follow instructions carefully.

Types of Headgear

TYPE 1

1. Handle everything carefully, especially when removing or inserting the inner bow. If a band which is cemented to a tooth becomes loose, call for an emergency appointment. Bring the band and all other material to the office.
2. The bow should be protected when not in use by keeping it, with the neck strap, in the container provided.

TYPE 2



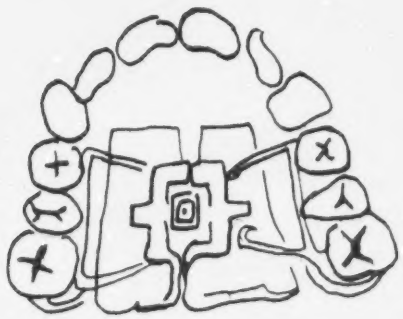
1. This type is designed to pull straight up and to slow or stop downward growth of back teeth.
2. The bow should be protected when not in use by keeping it, with the head cap, in the container provided.

The Orthodontist's Appliance

TYPE 3

1. This type is designed to lift front teeth back into the upper jaw.
2. Each side slides onto small hooks provided on the archwire that is tied to the bands and teeth. The outer bows on each side rest lightly along the cheek and enter at the corners of the mouth.

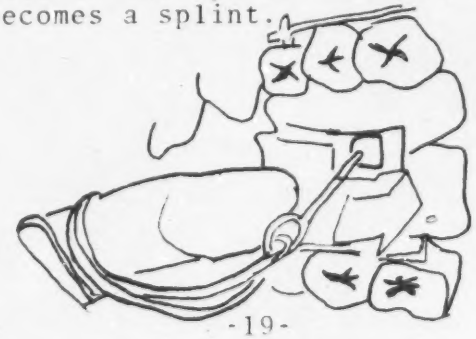
Palatal Spreading Devices:



There are certain types of orthodontic problems that are caused by the lack of enough bone growth to accomodate the upper teeth. In other cases there is room for the upper teeth,but the palate, or roof of the mouth, is so narrow that speech is impaired or made difficult. In still another type, the palate is so high that it actually cuts down on the amount of air that can pass through the nose, so that deep breathing, without opening the mouth, is almost impossible. In all of these cases, a palate spreading device is most helpful.

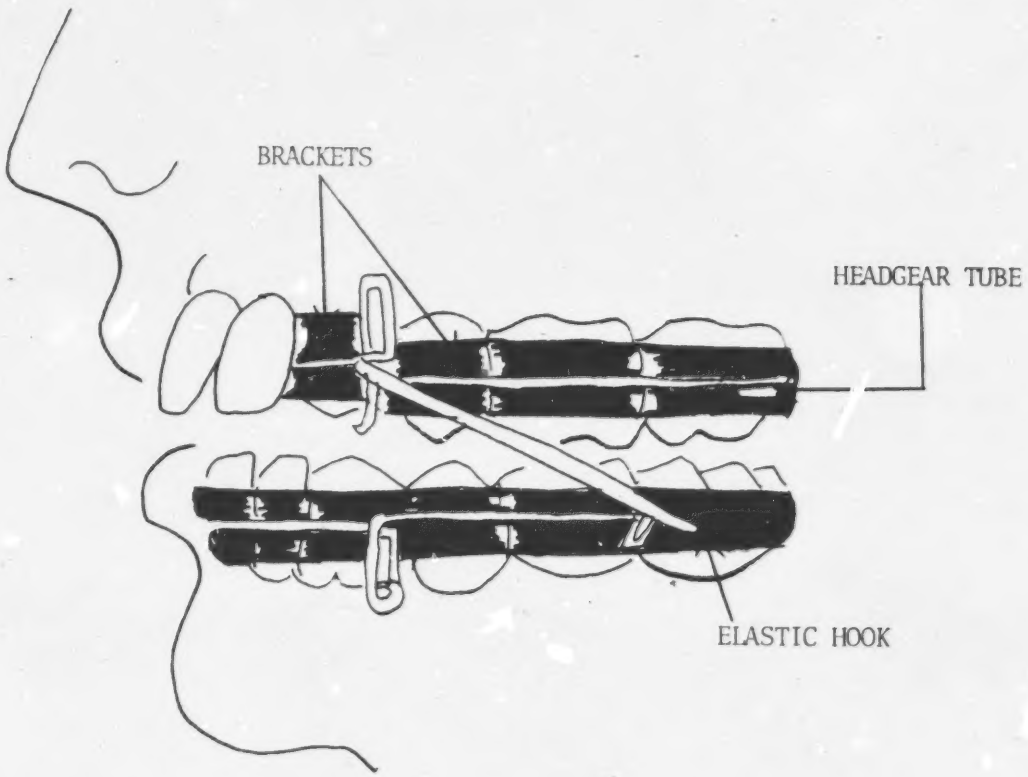
The maxilla, or upper jaw, is joined in the center by a suture, or joint, which allows it to be painlessly separated and spread. Once this has occurred, the two halves knit back together and new bone is laid down to make the jaw wider. That's how the palate spreading device works. It won't hurt. The teeth might be a bit uncomfortable for a day or two, and sometimes, about a week after the device is cemented into place, the roof of the mouth itches. But this is normal as the fibers there stretch and expand.

This palatal device is cemented in place, and the screw must be turned by parents twice a day; once in the morning and once at night. After the palate has been widened enough, it is necessary to hold it so new bone will fill in the space. Plastic is sometimes added to the jack screw so it becomes a splint.



25

The Parts of the Orthodontist's Appliance



Food, Health & Home — Cluster

The Orthodontist, Our Friend — Area of Study

CONCEPT: Knowledge of oral health and anatomy is basic to the development of good dental health habits.

OBJECTIVE: Demonstrate a knowledge of good eating and safety habits in relation to orthodontics by making charts and posters, or writing safety jingles, limericks, or slogans.

WHAT I NEED	WHAT I DO
WOW Worksheet: Eating Habits and Orthodontics 04 01. BOOK: Orthodontics: Questions and Answers, American Dental Assoc.	1. DISPLAY the WOW Worksheet 04 01, and HAVE the learners READ it, as well as the book, Orthodontics: Questions and Answers, pp. 10-11. ASK: a. What are three types of foods that orthodontic patients should not eat? b. What damage do hard food do to the orthopedic appliance? c. What damage can sticky foods do to the orthodontic appliance? d. Why should orthodontic patients avoid food high in sugar content?
WOW Worksheet: What If You Damage Your Appliance? 04 02.	2. STIMULATE discussion about safety habits in relationship to orthodontic appliances by asking learners to share experiences about themselves or others who have damaged their appliances. REFER learners to the WOW Worksheet 04 02 and DISCUSS the following questions: a. What is a basic rule for appliance wearers to follow in case of damage such as: loose bands, main arch wire break, small tie wire break, etc. b. What can be done in the case of a "Little Sticker?"
WOW Worksheet: Your Toothbrushing Responsibility. 04 03.	3. BRING OUT the importance of keeping teeth exceptionally clean while wearing orthodontic appliances by reviewing the WOW Worksheet 04 03 with the learners. DISCUSS the "when" and "how" of toothbrushing.

WHAT I NEED	WHAT I DO
	4. REINFORCE learning by having each learner CHOOSE at least one of the following activities to demonstrate a knowledge of good eating and safety habits in relation to orthodontics: a. Make a safety poster about orthodontic appliances. b. Write a safety jingle, limerick, or slogan about orthodontic appliances. c. Make a chart listing and illustrating activities that might damage an orthodontic appliance.

Eating Habits and Orthodontics

1. HARD FOODS may do damage by bending wires, loosening cement under the bands, or breaking the little brackets and tubes which are attached to the bands.

   Don't eat:

   Popcorn, nuts, peanut brittle
   Ice (not even if you're careful)
   Lemons (pure lemon juice is injurious to tooth enamel)
   Corn-on-the-cob
   Corn chips, crisp tacos

   Maybe:

   Carrot sticks (if you cut into carrot curls which are thin and will not do damage)
   Apples (cut into wedges)
   Hard French bread (if you take small pieces and are very careful)

2. STICKY FOODS damage appliances by bending wires and pulling cement loose.

   Don't eat:

   Taffy, "Fire Sticks"
   Caramels, Sugar Daddies
   Bubble Gum--a thousand times No!

Eating Habits and Orthodontics

3. FOODS HIGH IN SUGAR CONTENT should be avoided whenever possible. If you do eat any of them eat only at the end of a meal and brush your teeth immediately. If not convenient to brush, then always rinse your mouth with clear water after eating very sweet foods like cake or pie.

WOW Worksheet:

04 Lex. 02 W.S.

What If You Damage Your Appliance?

CALL YOUR ORTHODONTIST'S OFFICE

AT ONCE . . .

IF A BAND COMES LOOSE FROM A TOOTH.

IF A MAIN ARCH WIRE BREAKS.

1. If a small tie wire breaks, carefully remove it and call your orthodontist's office. If you are unable to take care of a sticking wire, place some Bee's Wax over the "Little Sticker." This is provided for you by your orthodontist.

2. Sometimes a "Little Sticker" can be safely turned down so that it no longer causes discomfort. Someone at home can take the handle of a spoon, or some other smooth object, and tuck the offending little wire back in out of the way.

Your Toothbrushing Responsibility

One of the common fears about orthodontics is that the bands may cause decay. Actually, the parts of the teeth which are covered by the orthodontic bands are protected from decay just as long as the cement under the bands is holding properly.

The bands, however, do make certain places on the teeth harder to clean. The brackets, tubes, and wires tend to make a little shelf around the outside of the teeth, and this shelf makes it harder for the toothbrush to clean the spaces between the gums and bands. If you fail to get the teeth clean and to exercise the gums, then the gums swell and make it more difficult to clean. Foods that usually slide across the teeth and gums during chewing are held back and prevented from doing their job of helping to clean the teeth and exercise the gums.

So--WHEN and HOW should the teeth be cleaned during orthodontic treatment?

WHEN--Within FIVE MINUTES after food is eaten. It is suggested that a travel type of folding toothbrush be carried when away from home.

HOW--1. First, move the brush back and forth across between the wires and gums in the upper and lower arches to loosen the food particles. When brushing the gums, the most difficult-to-reach area, the shelf will also be brushed.

2. Next, brush the usual correct way as if no bands were being worn.
   a. Start on the outside of the uppers. Brush down, the direction the teeth grow. Brush carefully all of the way around, brushing ten times in each spot before moving on.
   b. The same on the inner surfaces of the uppers.
   c. Scrub the chewing surfaces last.
   d. Start on the outside of the lower teeth and repeat this process, this time brushing up--the way the lower teeth grow.

3. Rinse the mouth and toothbrush. LOOK IN A MIRROR to see if any places have been missed. Check the little half-moon spaces of tooth between the bands and gums and the space between the molar tubes and gums.

Your Toothbrushing Responsibility

4. When finished, the bands and wires should be free of all food particles and soft white coatings. The bands should look clean and shiny. The small half-meon area of tooth between band and gum should be clean and the gum margin should be distinct and clean.

Food, Health & Home — Cluster

The Orthodontist, Our Friend — Area of Study

CONCEPT: There are many new developments in the dental profession and its related career specialties.

OBJECTIVE: Show interest in dentistry and its related field by identifying and describing the work of at least three of the new dental-related career specialties.

WHAT I NEED	WHAT I DO
	1. MOTIVATE the learners by asking the following: a. Are there other careers related to dentistry? If so, what are they? b. What do dentists go into when they specialize? c. Does your dentist have any helpers? If so, who are they? What do these helpers do, and why do we have them?
WOW Worksheet: THE DENTIST AND HIS HELPERS. The Dentist's Helpers. 02 01. WOW Worksheet: The Eight Areas of Specialization Which Are Recognized by the American Dental Association. 05 01. BOOKS: Dentistry--A Changing Profession, American Dental Assoc. Careers in Dentistry, American Dental Assoc.	2. REFER to WOW Worksheet 02 01 from the unit The Dentist and His Helpers, to WOW Worksheet 05 01, and to the suggested books for explanations of their work. 3. HAND OUT copies of the above WOW Worksheets to the learners and HELP them read it and study the pictures. Be sure each learner can identify and describe the work of at least three of the new dental-related fields. 4. BUILD the idea that all of these people work closely with the dentist as a team, that the eight areas of specialization are all very important in taking care of our dental health needs. 5. If any of these dental-related career specialists happen to be available in your area, INVITE one or several to come to the class as resource persons to share what they do with the learners.

WHAT I NEED	WHAT I DO
	6. PREPARE for the visits by discussing questions the learners will want to ask, such as: a. The training required. b. The approximate number of practitioners in each specialty (job opportunity). c. The thing they like best about their work. d. The thing they like least about their work. 7. HAVE the learners RESEARCH the area they are most interested in by: a. writing letters to the Council on Dental Education American Dental Association 211 East Chicago Avenue Chicago, Illinois 60611 b. interviewing specialists in these fields.

WOW Worksheet: 05 Lex. 01 W.S.

The Eight Areas of Specialization Which are Recognized by the American Dental Association

(The approximated number of practitioners in each specialty, as of 1970, are shown in parentheses.)

1. DENTAL PUBLIC HEALTH, which is the control and prevention of dental disease and the promotion of oral health through organized community efforts. It is that form of dental practice which treats the community as a patient, rather than the individual. (100)

2. ENDODONTICS, which deals with the causes, diagnoses, prevention and treatment of diseases of the pulp and other dental tissues which affect the vitality of teeth. (475)

3. ORAL PATHOLOGY, which is concerned with the nature of diseases of the mouth, through study of their causes, processes, and effects. As diagnostician, the oral pathologist does not necessarily treat the diseases directly, but may provide counsel and guidance to other specialists who do provide treatment. (100)

4. ORAL SURGERY, which includes a broad scope of diagnostic, operative, and related services dealing with diseases, injuries, and defects in the jaws and associated structures. (2400)

5. ORTHODONTICS, the science of tooth and oral structure development. The orthodontist treats problems related to irregular dental development, missing teeth, and other abnormalities in order to establish normal functioning and appearance. (4200)

6. PEDODONTICS, which is limited to the treatment of children, adolescents, and young adults whose dental development is not complete. (1150)

7. PERIODONTOLOGY, the science of diseases which affect the oral mucous membranes as well as other structures which surround and support the teeth. Periodontology may be considered as a clinical projection of oral pathology to include treatment of the conditions named above. (1050)

8. PROSTHODONTICS, which is the science--and art--of replacing missing natural teeth and associated structures with fixed or removable substitutes. (725)

36

MATERIALS LIST

Pamphlets & Books

TITLE	PUBLISHER	PRICE
Orthodontics: Questions and Answers	American Dental Association Order Department 211 East Chicago Avenue Chicago, Illinois 60611	.10
Artificial Dentures--A Health Service	" " "	25 for .75
Attractive Teeth for Teenagers	" " "	.05
Dental Health Facts For Teachers	" " "	.20
Dentistry--A Changing Profession	" " "	
Careers In Dentistry	" " "	.15

16 mm Motion Pictures

PRODUCER OR DISTRIBUTOR	TITLE	TIME OR LENGTH	COLOR OR B & W
American Dental Association 211 East Chicago Avenue Chicago, Illinois 60611	Putting It Straight Jr. High Rental Fee--$5.00	14 min.	color

Miscellaneous

ITEM	SOURCE	COPY-RIGHT DATE
WOW Worksheets:	World of Work Project	1972
Functions of the Teeth, 03 03 The Dentist's Helpers, 02 01 (From the Unit-- The Dentist & His Helpers)	" " " "	"